

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P309582

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP250-W2A-U-3000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P309582
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50-UNV-L82765-HRP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3039.0 lumens
Efficiency: N/A
Efficacy: 71.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

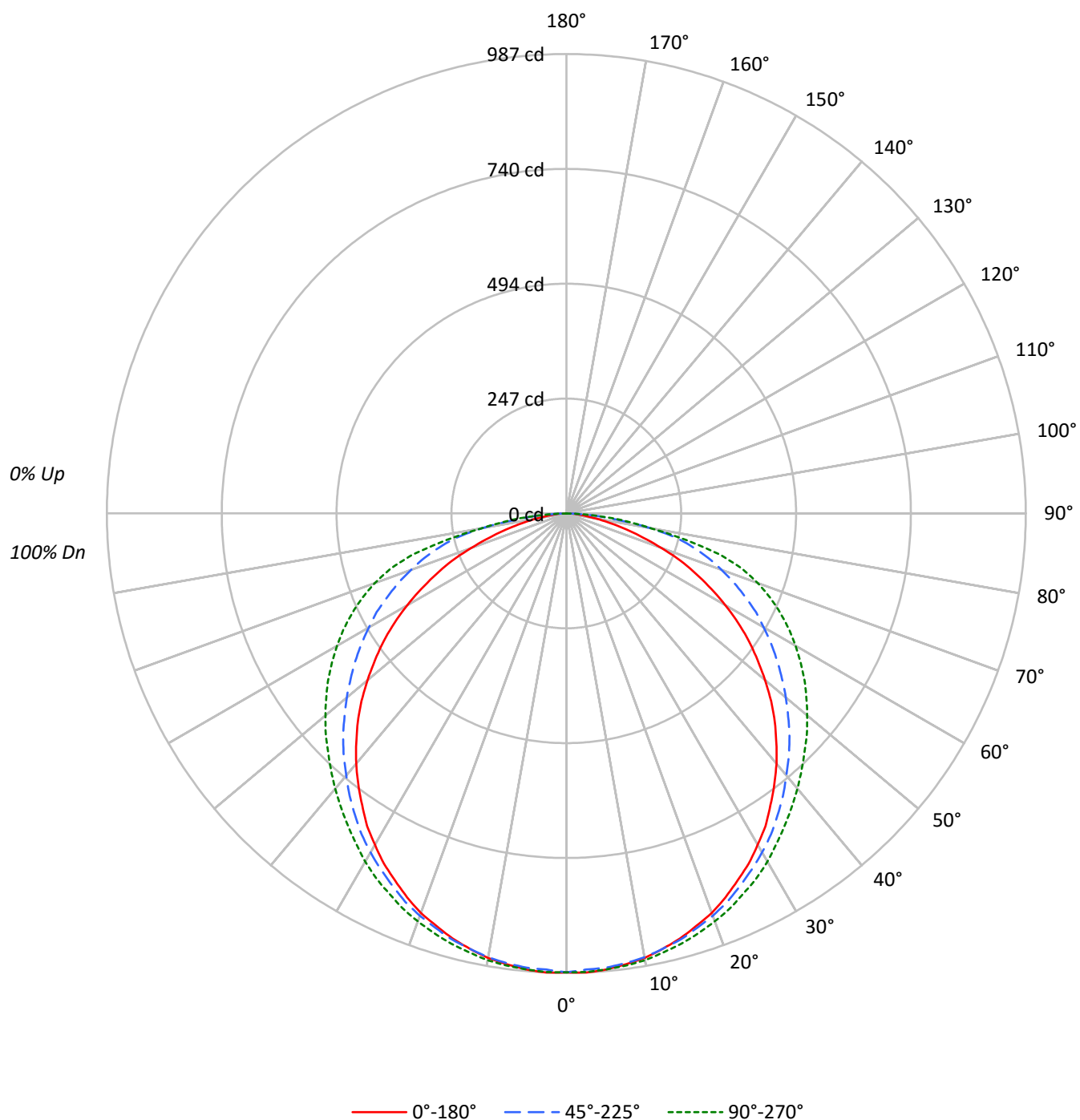
Input Watts (W): 42.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1327	1327	1327
5°	1328	1323	1328
10°	1325	1323	1332
15°	1317	1320	1333
20°	1308	1317	1335
25°	1292	1311	1337
30°	1277	1307	1342
35°	1256	1300	1344
40°	1234	1292	1356
45°	1206	1290	1377
50°	1167	1289	1414
55°	1125	1298	1465
60°	1061	1318	1530
65°	980	1349	1616
70°	856	1397	1722
75°	695	1468	1779
80°	513	1440	1440
85°	392	1061	1198



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.4	3.1
10°-20°	268.2	8.8
20°-30°	408.3	13.4
30°-40°	495.8	16.3
40°-50°	523.8	17.2
50°-60°	494.3	16.3
60°-70°	411.0	13.5
70°-80°	270.4	8.9
80°-90°	73.7	2.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	770.0	25.3
0°-40°	1265.8	41.7
0°-60°	2283.9	75.2
0°-90°	3039.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3039.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	986	986	986	986	986	
5°	984	984	980	984	984	93
15°	945	947	948	957	957	267
25°	870	875	883	898	901	401
35°	765	774	791	812	818	479
45°	634	646	678	711	724	488
55°	480	500	553	606	625	427
65°	308	344	424	486	508	304
75°	134	195	282	335	342	144
85°	25	56	69	76	78	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	986.0	986.0	986.0	986.0	986.0
2.5°	987.3	986.0	980.9	986.0	986.0
5°	983.5	983.5	979.6	983.5	983.5
7.5°	977.1	977.1	974.6	979.6	979.6
10°	969.5	969.5	968.2	974.6	974.6
12.5°	958.0	959.3	958.0	965.6	965.6
15°	945.3	946.6	947.8	956.7	956.7
17.5°	928.8	931.3	933.8	944.0	945.3
20°	913.5	914.8	919.8	931.3	932.6
22.5°	893.1	896.9	903.3	914.8	918.6
25°	870.2	875.3	883.0	898.2	900.8
27.5°	848.6	852.4	862.6	879.1	884.2
30°	821.9	828.2	841.0	857.5	863.9
32.5°	796.4	802.8	818.1	835.9	841.0
35°	764.6	773.5	791.3	811.7	818.1
37.5°	734.1	743.0	764.6	787.5	795.2
40°	702.3	712.5	735.4	762.1	772.3
42.5°	667.9	681.9	707.4	736.6	748.1
45°	633.6	646.3	678.1	711.2	723.9
47.5°	596.7	612.0	646.3	685.8	701.0
50°	557.3	576.3	615.8	659.0	675.6
52.5°	517.8	539.4	584.0	632.3	650.1
55°	479.6	500.0	553.4	605.6	624.7
57.5°	437.7	463.1	521.6	577.6	596.7
60°	394.4	422.4	489.8	548.3	568.7
62.5°	351.1	383.0	459.3	517.8	539.4
65°	307.9	343.5	423.7	486.0	507.6
67.5°	265.9	305.3	390.6	452.9	474.6
70°	217.6	267.2	355.0	416.0	437.7
72.5°	173.0	230.3	320.6	377.9	396.9
75°	133.6	194.7	282.4	334.6	342.2
77.5°	98.0	159.0	243.0	260.8	262.1
80°	66.2	127.2	185.8	183.2	185.8
82.5°	43.3	95.4	117.0	131.0	132.3
85°	25.4	56.0	68.7	76.3	77.6
87.5°	12.7	19.1	24.2	25.4	28.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)